

IN THE SPECIFICATION

Please amend the specification as follows:

[0014] In another aspect of this invention, an immunogenic amount of a helminthic antigen (either the protein, glycoprotein, or any of the other forms that an helminth secreted/produced immunogenic antigen may assume) is administered. In a preferred embodiment, the antigen is isolated from 3-5 different nematodes, trematodes and/or cestodes. Preferably, the antigen is isolated from *Capillaria hepatica* and/or *Dicrocoelium ~~dendriticum~~ dendriticum* and/or *Schistosomes*.

[0057] There are at least 70 species of parasitic worms known to infect man. Several of these are rare or accidental and of little consequence to a mankind as a whole (Crompton and Joyner, 1980). In many embodiments, at least one type of helminth-specific antigen or monoclonal antibody is used for vaccination purposes. In a preferred embodiment, the antigen or antibody for vaccination is derived from the nematode *Capillaria hepatica*. *C. hepatica* mainly parasitizes rodents, although dogs, squirrels, and monkeys can become infected as well. Human infection is very rare and only a few cases have been reported (Spencer and Lee, 1977). In fact, there were only 10 reports of human infection with *C. hepatica* before 1971. (Beck and Barrett-Conner, 1971). *C. hepatica* is rarely found parasitizing humans today as well. In several embodiments, the rarity of *C. hepatica* makes it one of the two preferred choices for the aforementioned vaccine. In another embodiment, the trematode *Dicrocoelium ~~dendriticum~~ dendriticum*, more commonly known as a liver fluke, is utilized. *D. ~~dendriticum~~ dendriticum* is a common parasite that is found primarily in sheep.

[0058] In many embodiments, more than one type of helminthic antigen or helminth-specific monoclonal antibody is used for vaccination purposes. In one embodiment, the antigen or antibody for vaccination can derived from the nematode *Loa loa* that infects the skin and the eyes. Loiasis, the disease caused by *Loa loa*, and the parasites themselves are only found in Africa and therefore would be useful in a vaccine everywhere, except in the continent of Africa. In another embodiment, a candidate for an helminth-specific antigen or monoclonal

Appl. No. : 10/719,532
Filed : November 21, 2003

antibody to be used for a vaccine are the schistosomes, a type of trematode or flatworm that causes the disease schistosomiasis. Schistosomes are prevalent in Asia, Africa, and the Middle East. Although schistosomiasis is seen in the United States among immigrants from endemic countries, the infection can never become endemic in North America because the essential snail hosts are not found here (Ingraham, Ingraham, 1995). Therefore, the antigen extracted from the Schistosomes or the antibodies that are produced upon exposure to the worm(s) antigen(s) could be ideally utilized in a vaccine everywhere, except Asia, Africa, and the Middle East. Children born in the United States and other westernized societies would not likely be infected by these parasites, unless they traveled to the country or countries in which the aforementioned helminths are endemic and they encountered the parasite in the stage of development that corresponds to human susceptibility to infection. When allergy vaccinated people travel to these countries, appropriate measures to prevent contact and infestation with these parasites may be taken. Further, the individual could further protect himself or herself by being tested, after his or her trip, to determine if he or she was exposed to the helminth in question. Indeed, any individual may be tested for the presence or evidence of infestation by the helminth in question, assuming the vaccine does not utilize the antigen, or monoclonal antibodies specific to the antigenic protein, from one of the aforementioned preferred choices, specifically, *C. hepatica* and/or *D. dendriticum dendriticum*.